IN THE CLAIMS

1. (Currently Amended) A method of managing energy in a processing system, comprising:

    receiving an indication of a need to reduce a energy usage level in said processing system at a scheduler;

    determining whether or not a next process to be scheduled has an associated level of energy usage greater than a threshold; and

    selectively scheduling an execution slice for said next process in response to determining that said associated level of energy usage does not exceed said threshold, and not scheduling said execution slice for said next process in response to determining that said associated level of energy usage does exceed said threshold.

2. (Original) The method of Claim 1, further comprising:

    reading values of a plurality of performance counters during one or more previous execution slices of said next process; and

    estimating said associated level of energy usage in conformity with said values of said plurality of performance counters.

3. (Currently Amended) The method of Claim 1, further comprising:

    measuring actual energy usage of said processing system during one or more previous execution slices of said next process; and

    estimating said associated level of energy usage in conformity with said measured energy usage.

4. (Original) The method of Claim 1, further comprising:

    second determining a resource usage of said next process; and

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estimating said associated level of energy usage in conformity with said resource usage.

5. (Original) The method of Claim 4, further comprising receiving from an application owning said next process an indication of said resource usage, and wherein said second determining determines said resource usage in conformity with said received indication.

6. (Original) The method of Claim 4, wherein said second determining is performed by said operating system by observing prior allocation of resources to said next process.

7. (Original) The method of Claim 1, further comprising:
      issuing a pragmatic warning fault indicating that a system energy usage above a system energy threshold; and
      second receiving said pragmatic warning fault at an application associated with said next process, and in response to said second receiving, reducing a resource usage within said application, whereby a energy usage of said next process is reduced.

8. (Original) The method of Claim 7, further comprising:
      issuing a critical pragmatic fault indicating that said system energy usage has not been reduced below said system energy threshold; and
      receiving said critical pragmatic fault at said scheduler, and wherein said selectively scheduling is performed in response to said receipt of said critical pragmatic fault by said scheduler.

9. (Original) The method of Claim 1, wherein said selectively scheduling inserts idle slices into an execution queue, whereby said energy usage level is reduced.

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10. (Original) The method of Claim 1, wherein said selectively scheduling schedules a second process having a lower level of energy usage than said next process in preference over said next process.

11. (Currently Amended) A processing system, comprising:

a processor;

a memory coupled to said processor for storing program instructions and data values, and wherein said program instructions comprise an operating system scheduler that includes program instructions for

receiving an indication of a need to reduce a energy usage level in said processing system at a scheduler,

determining whether or not a next process to be scheduled has an associated level of energy usage greater than a threshold, and

selectively scheduling an execution slice for said next process in response to determining that said associated level of energy usage does not exceed said threshold, and not scheduling said execution slice for said next process in response to determining that said associated level of energy usage does exceed said threshold.

12. (Original) The processing system of Claim 11, wherein said program instructions further comprise program instructions for:

reading values of a plurality of performance counters during one or more previous execution slices of said next process; and

estimating said associated level of energy usage in conformity with said values of said plurality of performance counters.

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13. (Currently Amended) The processing system of Claim 11, wherein said program instructions further comprise program instructions for:

 measuring actual energy usage of said processing system during one or more previous execution slices of said next process; and

 estimating said associated level of energy usage in conformity with said measured energy usage.

14. (Original) The processing system of Claim 11, wherein said program instructions further comprise program instructions for:

 second determining a resource usage of said next process; and

 estimating said associated level of energy usage in conformity with said resource usage.

15. (Original) The processing system of Claim 14, wherein said program instructions further comprise program instructions for receiving from an application owning said next process an indication of said resource usage, and wherein said determining determines said resource usage in conformity with said received indication.

16. (Original) The processing system of Claim 14, wherein said program instructions for second determining further comprise program instructions for observing prior allocation of resources to said next process.

17. (Original) The processing system of Claim 11, wherein said program instructions further comprise program instructions for:

 issuing a pragmatic warning fault indicating that a system energy usage above a system energy threshold; and

 receiving said pragmatic warning fault at an application associated with said next process, and in response to said

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receiving, reducing a resource usage within said application, whereby a energy usage of said next process is reduced.

18. (Currently Amended) The processing system of Claim 17~~1~~, wherein said program instructions further comprise program instructions for:

issuing a critical pragmatic fault indicating that said system energy usage has not been reduced below said system energy threshold; and

receiving said critical pragmatic fault at said scheduler, and wherein said selectively scheduling is performed in response to said receipt of said critical pragmatic fault by said scheduler.

19. (Original) The processing system of Claim 11, wherein said program instructions for selectively scheduling insert idle slices into an execution queue, whereby said energy usage level is reduced.

20. (Original) The processing system of Claim 11, wherein said program instructions for selectively scheduling schedule a second process having a lower level of energy usage than said next process in preference over said next process.

21. (Currently Amended) A computer program product comprising signal-bearing media encoding program instructions and data, wherein said program instructions comprise an operating system scheduler that includes program instructions for

receiving an indication of a need to reduce a energy usage level in said processing system at a scheduler, determining whether or not a next process to be scheduled has an associated level of energy usage greater than a threshold, and

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selectively scheduling an execution slice for said next
process in response to determining that said associated
level of energy usage does not exceed said threshold, and
not scheduling said execution slice for said next process in
response to determining that said associated level of energy
usage does exceed said threshold.

22. (Original) The computer program product of Claim 21, wherein
said program instructions further comprise program instructions
for:
    reading values of a plurality of performance counters during
one or more previous execution slices of said next process; and
    estimating said associated level of energy usage in
conformity with said values of said plurality of performance
counters.

23. (Currently Amended) The computer program product of Claim 21,
wherein said program instructions further comprise program
instructions for:
    measuring actual energy usage of said processing system
during one or more previous execution slices of said next
process; and
    estimating said associated level of energy usage in
conformity with said measured energy usage.

24. (Original) The computer program product of Claim 21, wherein
said program instructions further comprise program instructions
for:
    second determining a resource usage of said next process;
and
    estimating said associated level of energy usage in
conformity with said resource usage.

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25. (Original) The computer program product of Claim 24, wherein said program instructions further comprise program instructions for receiving from an application owning said next process an indication of said resource usage, and wherein said determining determines said resource usage in conformity with said received indication.

26. (Original) The computer program product of Claim 24, wherein said program instructions for second determining further comprise program instructions for observing prior allocation of resources to said next process.

27. (Original) The computer program product of Claim 21, wherein said program instructions further comprise program instructions for:
   issuing a pragmatic warning fault indicating that a system energy usage above a system energy threshold; and
   receiving said pragmatic warning fault at an application associated with said next process, and in response to said receiving, reducing a resource usage within said application, whereby a energy usage of said next process is reduced.

28. (Currently Amended) The computer program product of Claim 27~~1~~, wherein said program instructions further comprise program instructions for:
   issuing a critical pragmatic fault indicating that said system energy usage has not been reduced below said system energy threshold; and
   receiving said critical pragmatic fault at said scheduler, and wherein said selectively scheduling is performed in response to said receipt of said critical pragmatic fault by said scheduler.

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29. (Original) The computer program product of Claim 21, wherein said program instructions for selectively scheduling insert idle slices into an execution queue, whereby said energy usage level is reduced.

30. (Original) The computer program product of Claim 21, wherein said program instructions for selectively scheduling schedule a second process having a lower level of energy usage than said next process in preference over said next process.

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